H02. Evaluating perchloric acid for the saccharification of selected seaweeds

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Many marine algae have high content of carbohydrates, high growth rate and very low lignin content, making them good sources of biomass for bioethanol production. In contrast to corn and sugar-cane, use of seaweeds for biofuel production does not have conflict with use as a food source. In this study, aqueous perchloric acid (PA) was used to convert selected seaweeds (*Gracilaria changii and Gelidium elegans)* to reducing sugars at various temperatures, treatment time, different acid concentrations. The maximum reducing sugars obtained was 76% per total carbohydrate from *Gelidium elegans* by dilute PA (1% v/v) under the condition of 121°C 3:1 and 1 hour treatment time. Another advantage was that by using these condition, very low amount of furfural and

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hydroxymethyl furfural were generated.